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FILE 'USPAT' ENTERED AT 13:51:07 ON 20 JUL 1999
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 *     U.S. PATENT TEXT FILE      *
 *                                *
 * THE WEEKLY PATENT TEXT AND IMAGE DATA IS CURRENT      *
 * THROUGH July 20,1999                *
 *                                *
 *                                *
 **********************************
=> s vaccinia or pox?
      2872 VACCINIA
      2266 POX?
L1     4288 VACCINIA OR POX?
=> s dengue
L2      293 DENGUE
=> s l1(p)l2
L3      123 L1(P)L2
=> s (l1 and l2)/clm
QUALIFICATION NOT VALID FOR 'L1'
=> s l1/clm
       196 VACCINIA/CLM
       197 POX?/CLM
L4      351 (VACCINIA/CLM OR POX?/CLM)
=> s l2/clm
L5       16 (DENGUE/CLM)
=> s l4 and l5
L6        7 L4 AND L5
=> d 1-7
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1. 5,766,599, Jun. 16, 1998, Trova fowl pox virus recombinants comprising heterologous inserts; Enzo Paoletti, et al., 424/199.1, 232.1; 435/69.1, 69.3, 235.1, 320.1 [IMAGE AVAILABLE]

2. 5,756,103, May 26, 1998, Alvac canarypox virus recombinants comprising heterlogous inserts; Enzo Paoletti, et al., 424/199.1, 204.1, 206.1, 207.1, 208.1, 214.1, 232.1; 435/69.3, 173.3, 235.1, 252.3, 320.1; 530/350, 826 [IMAGE AVAILABLE]

3. 5,744,141, Apr. 28, 1998, Flavivirus recombinant poxvirus immunological composition; Enzo Paoletti, et al., 424/199.1, 184.1, 186.1, 204.1, 210.1, 218.1, 232.1; 435/70.1, 89, 235.1, 320.1 [IMAGE AVAILABLE]

4. 5,719,193, Feb. 17, 1998, Method of potentiating cell-mediated immunity utilizing polyamine derivatives; Terry L. Bowlin, et al., 514/673, 674, 885 [IMAGE AVAILABLE]

5. 5,494,807, Feb. 27, 1996, NYVAC vaccinia virus recombinants comprising heterologous inserts; Enzo Paoletti, et al., 435/69.3; 424/199.1, 204.1, 205.1, 218.1, 224.1, 227.1, 229.1, 230.1, 231.1, 232.1, 239.1; 435/235.1, 320.1; 514/2; 530/350, 826 [IMAGE AVAILABLE]

6. 5,494,671, Feb. 27, 1996, C-terminally truncated dengue and Japanese encephalitis virus envelope proteins; Ching-Jun Lai, et al., 424/218.1, 185.1, 186.1, 199.1, 202.1, 204.1; 435/69.3; 514/2; 530/350, 826; 536/23.72 [IMAGE AVAILABLE]

7. 3,919,044, Nov. 11, 1975, Processes for concentrating and purifying viruses and viral antigens; Joseph L. Melnick, et al., 435/239; 424/204.1, 209.1, 212.1, 213.1, 216.1, 217.1, 219.1, 229.1, 232.1; 435/272 [IMAGE AVAILABLE]

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=> s mva or ankara
       444 MVA
        11 ANKARA
L7      449 MVA OR ANKARA
=> d his

   (FILE 'USPAT' ENTERED AT 13:51:07 ON 20 JUL 1999)
L1     4288 S VACCINIA OR POX?
L2      293 S DENGUE
L3      123 S L1(P)L2
L4      351 S L1/CLM
L5       16 S L2/CLM
L6        7 S L4 AND L5
L7      449 S MVA OR ANKARA
=> s l3 and l7
L8        0 L3 AND L7
=> s l2 and l7
L9        1 L2 AND L7
=> d

1. 5,789,229, Aug. 4, 1998, Stranded RNA virus particles; Gail W. Wertz, et al., 435/235.1, 320.1; 514/44 [IMAGE AVAILABLE]
=> d his

   (FILE 'USPAT' ENTERED AT 13:51:07 ON 20 JUL 1999)
L1     4288 S VACCINIA OR POX?
L2      293 S DENGUE
L3      123 S L1(P)L2
L4      351 S L1/CLM
L5       16 S L2/CLM
L6        7 S L4 AND L5
L7      449 S MVA OR ANKARA
L8        0 S L3 AND L7
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L9 1 S L2 AND L7
=> s recombinant or vector
21038 RECOMBINANT
70128 VECTOR
L10 77417 RECOMBINANT OR VECTOR
=> s l7(p)l10
L11 18 L7(P)L10
=> d 1-18

1. 5,883,678, Mar. 16, 1999, Video coding and video decoding apparatus for reducing an alpha-map signal at a controlled reduction ratio; Noboru Yamaguchi, et al., 348/390, 423, 441, 845.3 [IMAGE AVAILABLE]

2. 5,840,839, Nov. 24, 1998, Alternative open reading frame DNA of a normal gene and a novel human cancer antigen encoded therein; Rong-Fu Wang, et al., 530/325, 328 [IMAGE AVAILABLE]

3. 5,831,016, Nov. 3, 1998, Identification of TRP-2 as a human tumor antigen recognized by cytotoxic T lymphocytes; Rong-Fu Wang, et al., 530/350, 300, 328, 828 [IMAGE AVAILABLE]

4. 5,789,229, Aug. 4, 1998, Stranded RNA virus particles; Gail W. Wertz, et al., 435/235.1, 320.1; 514/44 [IMAGE AVAILABLE]

5. 5,739,865, Apr. 14, 1998, Image processing system with selective reproduction using thinning out or interpolation; Koji Takahashi, 348/405, 404, 414; 382/251; 386/111 [IMAGE AVAILABLE]

6. 5,686,971, Nov. 11, 1997, Still picture generating apparatus and freeze encoder; Shinri Inamori, 348/559, 24, 571, 699 [IMAGE AVAILABLE]

7. 5,676,950, Oct. 14, 1997, Enterically administered recombinant poxvirus vaccines; Parker A. Small, Jr., et al., 424/199.1, 232.1, 400, 463, 474, 490; 435/235.1 [IMAGE AVAILABLE]

8. 5,656,465, Aug. 12, 1997, Methods of in vivo gene delivery; Dennis L. Panicali, et al., 435/456, 320.1 [IMAGE AVAILABLE]

9. 5,619,119, Apr. 8, 1997, Method of phase-shifting voltages applied to susceptances interconnecting two synchronous polyphase AC networks and a phase-shifting interconnecting apparatus thereof; Pierre Pelletier, et al., 323/215, 212 [IMAGE AVAILABLE]

10. 5,614,945, Mar. 25, 1997, Image processing system modifying image shake correction based on superimposed images; Masayoshi Sekine, et al., 348/208, 699 [IMAGE AVAILABLE]

11. 5,453,364, Sep. 26, 1995, Recombinant poxvirus host range selection system; Enzo Paoletti, 435/69.3, 69.1, 235.1, 320.1 [IMAGE AVAILABLE]

12. 5,400,087, Mar. 21, 1995, Motion vector detecting device for compensating for movements in a motion picture; Shinichi Uramoto, et al., 348/699, 402 [IMAGE AVAILABLE]

13. 5,355,168, Oct. 11, 1994, High precision motion compensation apparatus; Kenji Sugiyama, 348/416, 402, 407, 409, 411, 412 [IMAGE AVAILABLE]

14. 5,225,336, Jul. 6, 1993, Recombinant poxvirus host range selection system; Enzo Paoletti, 435/69.1; 424/199.1, 205.1, 224.1, 229.1, 232.1; 435/235.1, 320.1 [IMAGE AVAILABLE]

15. 5,185,146, Feb. 9, 1993, **Recombinant** **MVA** vaccinia virus; Werner Altenburger, 424/199.1, 232.1, 272.1; 435/69.1, 69.3, 235.1, 236, 237, 239, 320.1 [IMAGE AVAILABLE]

16. 4,878,186, Oct. 31, 1989, Method and circuit for processing narrow band signals located in a wide band having disturbance; Daniel Gagnon, 702/194 [IMAGE AVAILABLE]

17. 4,057,714, Nov. 8, 1977, Durability or service-life monitoring device for a turbogenerator shaft; Kurt Fork, et al., 702/34; 73/116, 862.193; 395/500.24 [IMAGE AVAILABLE]

18. 3,716,685, Feb. 13, 1973, MAGNETIC CIRCUIT BREAKER; Gerald L. Wilson, 218/23, 27, 31 [IMAGE AVAILABLE]
=> d his

(FILE 'USPAT' ENTERED AT 13:51:07 ON 20 JUL 1999)
L1 4288 S VACCINIA OR POX?
L2 293 S DENGUE
L3 123 S L1(P)L2
L4 351 S L1/CLM
L5 16 S L2/CLM
L6 7 S L4 AND L5
L7 449 S MVA OR ANKARA
L8 0 S L3 AND L7
L9 1 S L2 AND L7
L10 77417 S RECOMBINANT OR VECTOR
L11 18 S L7(P)L10
=> s t7
L12 11325 T7
=> s dna vaccine?
32028 DNA

7804 VACCINE?
L13 67 DNA VACCINE?
(DNA(W)VACCINE?)
=> s l12 and l13
L14 17 L12 AND L13
=> s l12(p)l13
L15 0 L12(P)L13
=> d l14 1-17

1. 5,922,327, Jul. 13, 1999, Equine herpes virus glycoproteins; Brendan Scott Crabb, et al., 424/229.1; 435/69.3, 975; 436/94; 514/44; 530/350; 536/23.72 [IMAGE AVAILABLE]

2. 5,914,318, Jun. 22, 1999, Transgenic plants expressing lepidopteran-active .delta.-endotoxins; James A. Baum, et al., 514/12; 435/252.31; 530/350 [IMAGE AVAILABLE]

3. 5,910,626, Jun. 8, 1999, Acetyl-CoA carboxylase compositions and methods of use; Robert Haselkorn, et al., 435/69.1, 252.3, 252.33, 254.2, 257.1, 320.1, 419; 536/23.6 [IMAGE AVAILABLE]

4. 5,879,687, Mar. 9, 1999, Methods for enhancement of protective immune responses; Steven G. Reed, 424/269.1, 184.1; 514/12 [IMAGE AVAILABLE]

5. 5,874,304, Feb. 23, 1999, Humanized green fluorescent protein genes and methods; Sergei Zolotukhin, et al., 435/366, 320.1, 325, 354, 357, 358, 365, 367; 536/23.1, 23.5 [IMAGE AVAILABLE]

6. 5,863,542, Jan. 26, 1999, Recombinant attenuated ALVAC canaryopox virus containing heterologous HIV or SIV inserts; Enzo Paoletti, et al., 424/199.1, 188.1, 208.1, 232.1; 435/236 [IMAGE AVAILABLE]

7. 5,854,416, Dec. 29, 1998, Streptococcus pneumoniae 37-KDA surface adhesin a protein and nucleic acids coding therefor; Jacquelyn S. Sampson, et al., 536/23.7; 424/244.1; 435/320.1; 536/23.1 [IMAGE AVAILABLE]

8. 5,853,987, Dec. 29, 1998, Decorin binding protein compositions and methods of use; Betty Guo, et al., 435/6, 91.2, 320.1; 530/350; 536/22.1, 23.1, 23.7, 24.33, 25.32 [IMAGE AVAILABLE]

9. 5,846,546, Dec. 8, 1998, Preparation and use of viral vectors for mixed envelope protein immunogenic composition against human immunodeficiency viruses; Julia Hurwitz, et al., 424/202.1, 199.1, 208.1; 514/44; 536/23.72 [IMAGE AVAILABLE]

10. 5,840,306, Nov. 24, 1998, DNA encoding human papillomavirus type 18; Kathryn J. Hofmann, et al., 424/192.1; 435/69.1, 69.3, 69.7, 252.3, 325, 361; 514/2, 12, 14, 16; 530/300, 324, 326, 328, 350, 402, 403 [IMAGE AVAILABLE]

11. 5,837,441, Nov. 17, 1998, Hantavirus-associated respiratory distress virus antigens; Brian Hjelle, et al., 435/5, 7.92, 69.3; 436/518; 530/350 [IMAGE AVAILABLE]

12. 5,820,870, Oct. 13, 1998, Recombinant human papillomavirus type 18 vaccine; Joseph G. Joyce, et al., 424/204.1, 184.1, 186.1; 435/69.1, 69.3, 235.1, 254.2; 530/350, 412 [IMAGE AVAILABLE]

13. 5,804,197, Sep. 8, 1998, Recombinant canine herpesviruses; Elizabeth J. Haanes, et al., 424/229.1, 199.1; 435/235.1, 320.1 [IMAGE AVAILABLE]

14. 5,801,233, Sep. 1, 1998, Nucleic acid compositions encoding acetyl-coa carboxylase and uses therefor; Robert Haselkorn, et al., 536/23.6; 435/69.1, 252.3, 252.33, 257.2, 320.1, 419, 975; 536/23.2, 24.3 [IMAGE AVAILABLE]

15. 5,753,235, May 19, 1998, Recombinant canine herpesviruses; Elizabeth J. Haanes, et al., 424/229.1, 147.1; 435/235.1; 530/388.3, 395 [IMAGE AVAILABLE]

16. 5,736,524, Apr. 7, 1998, Polynucleotide tuberculosis vaccine; Jean Content, et al., 514/44; 435/6, 69.1, 320.1, 375 [IMAGE AVAILABLE]

17. 5,595,912, Jan. 21, 1997, Specific DNA and RNA sequences associated with US IBDV variants, vector carrying DNA sequences, host carrying cloned vector, deduced amino acid sequences, vaccine and method of vaccination; Vikram Vakharia, et al., 435/320.1; 536/23.72 [IMAGE AVAILABLE]
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U.S. Patent & Trademark Office SESSION SUSPENDED AT 14:04:19 ON 20 JUL 199
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File 155:MEDLINE(R) 1966-1999/Sep W2
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Set Items Description
S1 11650 VACCINIA OR POX?
S2 2932 DENGUE
S3 64 S1 AND S2
S4 54 RD (unique items)
S5 717 MVA OR ANKARA
S6 2 S2 AND S5
S7 64825 ATTENUAT?
S8 68 S5 AND S7
S9 6319 T7
S10 543 DNA(W)VACCINE?
S11 1 S9 AND S10
? t s4/7/43 44 46-51

4/7/43 (Item 1 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs
(c) 1999 Derwent Publ Ltd. All rts. reserv.
0238027 DBA Accession No.: 99-08128 PATENT
Dengue virus envelope antigens which elicit non-immune enhancing dengue neutralizing monoclonal antibodies - recombinant vaccine based on vaccinia virus and DNA nucleic acid vaccine
AUTHOR: Drexler I; Sutter G; Cardosa M J; Hooi T P
CORPORATE SOURCE: Glostrup, Denmark; Neuherberg, Germany; Sarawak, Malaysia
PATENT ASSIGNEE: Bavarian-Nordic-Res.Inst.; GSF-Res.Inst.Environ.Health; Univ.Malaysia-Sarawak; Venture-Technologies 1999
PATENT NUMBER: WO 9915692 PATENT DATE: 990401 WPI ACCESSION NO.: 99-254722 (9921)
PRIORITY APPLIC. NO.: MY 974411 APPLIC. DATE: 970923
NATIONAL APPLIC. NO.: WO 98EP6009 APPLIC. DATE: 980921
LANGUAGE: English
ABSTRACT: A dengue virus envelope antigen or antigenic epitope which elicits non-immune enhancing dengue virus neutralizing monoclonal antibodies (MAbs) is claimed. Also claimed are: dengue virus antigens or antigenic epitopes and heterologous or synthetic peptides recognized by non-immune enhancing dengue virus neutralizing MAbs; DNA sequences encoding for these antigens; a MAb specifically binding to and identifying dengue-specific antigenic epitopes, especially those that elicit anti-dengue antibodies not able to effect immune enhancement or antibody dependent enhancement; a DNA construct encoding a dengue virus antigen under the control of a phage T7 RNA-polymerase promoter; and a recombinant modified vaccinia virus Ankara containing and expressing one or more DNAs encoding dengue virus antigens not able to effect immune enhancement or antibody dependent enhancement. The MAbs identify dengue virus antigens for treatment and prevention of dengue infection hemorrhagic fever and shock syndrome. Recombinant vaccines containing the antigens or vaccinia virus and nucleic acid vaccines are also claimed. (34pp)

4/7/44 (Item 2 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs
(c) 1999 Derwent Publ Ltd. All rts. reserv.
0225206 DBA Accession No.: 98-06803 PATENT
New recombinant modified vaccinia virus Ankara - dengue virus antigen gene expression in vaccinia virus for use as a recombinant vaccine or dengue virus cloning in a plasmid for gene therapy and use as a nucleic acid vaccine
AUTHOR: Cardosa M J; Sutter G; Erfle V
CORPORATE SOURCE: Glostrup, Denmark; Univ.Malaysia-Sarawak; GSF-Res.Inst.Environ.Health
PATENT ASSIGNEE: Bavarian-Nordic-Res.Inst. 1998
PATENT NUMBER: WO 9813500 PATENT DATE: 980402 WPI ACCESSION NO.: 98-239752 (9821)
PRIORITY APPLIC. NO.: DK 961035 APPLIC. DATE: 960924
NATIONAL APPLIC. NO.: WO 97EP5214 APPLIC. DATE: 970923
LANGUAGE: French
ABSTRACT: A new recombinant modified vaccinia virus Ankara is claimed, which expresses 1 or more DNA molecules encoding dengue virus antigens and is used for therapy and prevention of dengue virus infection. Also new is a recombinant vaccine, which comprises as the 1st component a recombinant modified vaccinia virus Ankara carrying and capable of expressing phage T7 RNA-polymerase and as further components 1 or more recombinant DNA vectors, each carrying at least 1 dengue virus antigen under transcriptional control of a phage T7 RNA-polymerase promoter.

The virus is very safe and a very efficient expression system. In an example, dengue virus type 2 NGC strain cDNA encoding a signal peptide of 14 amino acids preceding preM and all amino acids of preM and E including 40 amino acids at the C-terminus of E was isolated by polymerase chain reaction from dengue virus type 2 cDNA. The fragment was cloned into a vector to form a fragment carrying the preM-E fragment under the transcriptional control of the vaccinia virus early/late promoter P7.5. The fragment was cloned into modified vaccinia virus Ankara by homologous recombination. Recombinant viruses were isolated. (22pp)

4/7/46 (Item 4 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs

0160027 DBA Accession No.: 94-02578
Recombinant vaccinia viruses co-expressing dengue glycoproteins prM and E induce neutralizing antibodies in mice - potential use in dengue virus recombinant vaccine preparation
AUTHOR: Fonseca B A L; Pincus S; Shope R E; Paoletti E; +Mason P W
CORPORATE AFFILIATE: Univ.Yale Virogenetics U.S.Dept.Agr.
CORPORATE SOURCE: Yale Arbovirus Research Unit, Department of Epidemiology and Public Health, Yale University School of Medicine, New Haven, CT 06510, USA.
JOURNAL: Vaccine (12, 3, 279-85) 1994
CODEN: VACCDE
LANGUAGE: English
ABSTRACT: Recombinant vaccinia viruses expressing different portions of the dengue virus type 1 (DEN-1) genome (vP833, C-prM-E-NS1-NS2A-NS2B; vP1027, prM-E; vP962, prM-E-NS1-NS2A-NS2B; or vP841, NS1-NS2A) were constructed in order to establish the most immunogenic configuration of DEN-1 proteins. vP1027 and vP962 induced the synthesis of an E protein that was released from infected HeLa cells. The E protein expressed by vP1027 was indistinguishable from that expressed by DEN-1 based on migration in SDS-PAGE and endoglycosidase studies. vP962 also expressed an NS1 protein that appeared to be identical to NS1 expressed by DEN-1-infected cells. Mice inoculated with these 2 recombinants produced DEN-1 neutralizing (NEUT) and hemagglutination (HAI) inhibiting antibodies. The other 2 recombinant vaccinia viruses did not induce the production of extracellular forms of E and did not induce E-specific immune responses. The results support previous studies on the design of flavi virus-vaccinia vaccine candidates by showing the importance of co-expressing prM and E in order to induce the production of extracellular E and to elicit NEUT and HAI antibodies. (57 ref)

4/7/47 (Item 5 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs

0158233 DBA Accession No.: 94-00784 PATENT
Non-infective structural particle preparation containing flavi virus surface antigen protein - Japanese-encephalitis virus cDNA gene cloning in dengue virus-2-preinfected cell with a vaccinia virus vector and use of non-infective structural particle as recombinant vaccine
PATENT ASSIGNEE: Nippon-Zeon; Tokyoto-Shinkei-Chem. 1993
PATENT NUMBER: JP 5276941 PATENT DATE: 931026 WPI ACCESSION NO.: 93-373579 (9347)
PRIORITY APPLIC. NO.: JP 9243682 APPLIC. DATE: 920228
NATIONAL APPLIC. NO.: JP 9243682 APPLIC. DATE: 920228
LANGUAGE: Japanese
ABSTRACT: In a new method, a flavi virus-infected cell is infected with a recombinant vaccinia virus with integrated cDNA, and non-infective structural particles containing flavi virus E protein are separated. The cDNA encodes substantially all of the flavi virus-derived prM protein and surface antigen protein. The initial flavi virus is preferably dengue virus-2, and the cDNA encodes a Japanese-encephalitis virus protein. The sedimentation coefficient of the structural particle is below 100S. The particle preparation may be used as a recombinant vaccine. In an example, Vero cells were infected preliminarily with dengue virus-2 at an m.o.i. of 2, 24 hr prior to vaccinia virus infection. To 4 million preinfected Vero cells, recombinant vaccinia viruses LAJ6-Se and LAJ6 were infected at an m.o.i. of 2, followed by culture for 18 hr. The supernatant was filtered (0.2 um pore size) and ultracentrifuged at 150,000 x g for 2 hr. The precipitate was washed with phosphate-buffered saline, suspended in 100 ul 10 mM carbonate buffer (pH 9.8), diluted and coated. (7pp)

4/7/48 (Item 6 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs

0141548 DBA Accession No.: 92-14040 PATENT
Vaccine comprises recombinant, attenuated pox virus - recombinant modified vaccinia virus with attenuated virulence; used for vaccinating against viral infections such as rabies virus, hepatitis B virus, HIV virus, etc.; DNA sequence
PATENT ASSIGNEE: Virogenetics 1992
PATENT NUMBER: WO 9215672 PATENT DATE: 920917 WPI ACCESSION NO.: 92-331718 (9240)
PRIORITY APPLIC. NO.: US 847951 APPLIC. DATE: 920306
NATIONAL APPLIC. NO.: WO 92US1906 APPLIC. DATE: 920309
LANGUAGE: English
ABSTRACT: A modified recombinant virus (I) has its virus-encoded genetic functions associated with virulence inactivated so that the virus has attenuated virulence. Also claimed are: i. a vaccine for inducing an immunological response in a host animal comprising a carrier and (I); ii. a method for expressing a gene product in a cell cultured in vitro

comprising introducing (I) into a cell; and iii. a modified vector for expressing a gene product in a cell cultured in vitro; and iv. a modified vector for expressing a gene product in a host, the vector being modified so that it has attenuated virulence in the host. Genetic functions may be inactivated by deletion or insertional inactivation of an open reading frame encoding a virulence factor. (I) may include the recombinant vaccinia virus vP410, vP553, vP879, vP999, vP618, vP723, vP804, vP866, vP796, vP938, vP953, vP977, vP954 or NYVAC, etc. The safer vaccine may be used to prevent infection by a pox virus, particularly a vaccinia virus, or an avipox virus, such as fowl-pox virus and canary-pox virus. (455pp)

4/7/49 (Item 7 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs
(c) 1999 Derwent Publ Ltd. All rts. reserv.
0134889 DBA Accession No.: 92-07381 PATENT
New recombinant C-terminal truncated flavi virus E protein - dengue virus-2, dengue virus-4 or Japanese-encephalitis virus gene cloning in cell culture using a vaccinia virus or baculo virus vector for recombinant vaccine production
PATENT ASSIGNEE: Nat.Inst.Health-Bethesda 1992
PATENT NUMBER: US 7747785 PATENT DATE: 920225 WPI ACCESSION NO.: 92-123673 (9215)
PRIORITY APPLIC. NO.: US 747785 APPLIC. DATE: 910820
NATIONAL APPLIC. NO.: US 747785 APPLIC. DATE: 910820
LANGUAGE: English
ABSTRACT: New DNA constructs encode a truncated flavi virus E protein, e.g. from dengue virus-2, dengue virus-4 (preferred) or Japanese-encephalitis virus, and comprise a vector and a DNA insert encoding sufficient of the E protein N-terminal sequence to alter the intracellular processing pathway, resulting in accumulation on the outer membrane of the cell. The protein may also be secreted. The following are also new: recombinant viruses (e.g. a vaccinia virus or baculo virus vector) containing the truncated E protein gene; eukaryotic host cells (e.g. a CV-1, TK143 or Spodoptera frugiperda Sf9 insect cell culture) producing the truncated E protein; recombinant E proteins; antibodies specific for the truncated E proteins; and recombinant vaccines for use against flavi virus infection in humans and e.g. pigs and horses. The recombinant truncated proteins are more immunogenic and protective than the counterpart full-length proteins, or than shorter proteins which are retained intracellularly, and may be used in production of safe and effective recombinant vaccines. (85pp)

4/7/50 (Item 8 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs
(c) 1999 Derwent Publ Ltd. All rts. reserv.
0134291 DBA Accession No.: 92-06783 PATENT
Recombinant pox virus e.g. vaccinia virus, fowl-pox virus and canary-pox virus - expressing Japanese-encephalitis virus, yellow-fever virus or dengue virus envelope, membrane and non-structural protein use in recombinant vaccine
PATENT ASSIGNEE: Virogenetics 1992
PATENT NUMBER: WO 9203545 PATENT DATE: 920305 WPI ACCESSION NO.: 92-096889 (9212)
PRIORITY APPLIC. NO.: US 729800 APPLIC. DATE: 910717
NATIONAL APPLIC. NO.: WO 91US5816 APPLIC. DATE: 910815
LANGUAGE: English
ABSTRACT: A recombinant pox virus (PV) generating an extracellular flavi virus (FV) structural protein, capable of inducing protective immunity against FV infection, is claimed. Under preferred conditions, the PV is a vaccinia virus or a fowl-pox virus, preferably canary-pox virus. The FV is Japanese-encephalitis virus (vP650, vP555, vP658, vP583, vP825, vP829, vP857, vP864, vP908 or vP923), yellow-fever virus (vP725, vP729, vP764, vP766, vP869, vP984, vP997, vP1002 or vP1003), or dengue virus (vP867, vP955 or vP962). Recombinant PV vCP107 (Japanese-encephalitis virus and canary-pox virus) and vCP127 (yellow-fever virus and canary-pox virus) are specifically claimed. The PV contains FV DNA in a non-essential region of the PV genome for expression of extracellular FV proteins (Japanese-encephalitis virus precursor to membrane protein (M), envelope glycoprotein (E) and non-structural proteins NS1 and NS2A) capable of inducing neutralizing antibodies (Abs), hemagglutination-inhibiting Abs and protective immunity against FV infection. The recombinant PV produces correctly processed FV proteins which can be used to prepare vaccines. (117pp)

4/7/51 (Item 9 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs
(c) 1999 Derwent Publ Ltd. All rts. reserv.
0129504 DBA Accession No.: 92-01996 PATENT
Vaccines for protection against flavi virus e.g. dengue virus infection - construction of recombinant vaccinia virus vector encoding dengue virus envelope protein for use as vaccine
PATENT ASSIGNEE: Nat.Inst.Health-Bethesda 1991
PATENT NUMBER: US 7572633 PATENT DATE: 911022 WPI ACCESSION NO.: 91-353427 (9148)
PRIORITY APPLIC. NO.: US 572633 APPLIC. DATE: 900827
NATIONAL APPLIC. NO.: US 572633 APPLIC. DATE: 900827
LANGUAGE: English
ABSTRACT: The following are provided: a DNA construct (I) encoding 80-81% of the N-terminus of a flavi virus envelope (E) protein; a vector for introducing (I) into eukaryotic or prokaryotic host cells; host cells transformed with (I); a recombinant protein comprising 80-81% of the N-terminus of a flavi virus E protein; and purified antibodies specific for the recombinant E protein. The recombinant E protein is more

immunogenic than longer or shorter envelope proteins, and can be used as a vaccine for immunization of primates against flavi virus e.g. dengue virus infection. In an example, an extended DNA fragment encoding the N-terminal signal, complete E plus the first 30 amino acids of the downstream nonstructural 1 (NS1) protein of dengue virus was inserted into vaccinia virus (VV) vector plasmid pSC11. The extended DNA sequences were used to construct a gene bank of fragments specifying full-length E and a series of C-terminally truncated E. Mice immunized with recombinant VV expressing dengue virus 4 structural proteins and authentic NS1 were protected against fatal and lethal dengue virus encephalitis, respectively. (43 ref)

? t s8/7/15 16 18 20-22 24 25 29 30 47

8/7/15 (Item 15 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09228100 96201441

Expression of bacteriophage T7 RNA polymerase in avian and mammalian cells by a recombinant fowlpox virus.

Britton P; Green P; Kottier S; Mawditt KL; Penzes Z; Cavanagh D; Skinner MA

Division of Molecular Biology, Institute for Animal Health, Compton, Newbury, Berkshire, UK.

J Gen Virol (ENGLAND) May 1996, 77 (Pt 5) p963-7, ISSN 0022-1317
Journal Code: I9B

Languages: ENGLISH

Document type: JOURNAL ARTICLE

The bacteriophage T7 RNA polymerase gene was integrated into the fowlpox virus genome under the control of the vaccinia virus early/late promoter, P7.5. The recombinant fowlpox virus, fpEFLT7pol, stably expressed T7 RNA polymerase in avian and mammalian cells, allowing transient expression of transfected genes under the control of the T7 promoter. The recombinant fowlpox virus expressing T7 RNA polymerase offers an alternative to the widely used vaccinia virus vTF7-3, or the recently developed modified vaccinia virus Ankara (MVA) T7 RNA polymerase recombinant, a highly attenuated strain with restricted host-range. Recombinant fowlpox viruses have the advantage that as no infectious virus are produced from mammalian cells they do not have to be used under stringent microbiological safety conditions.

8/7/16 (Item 16 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09106153 97286006

Highly attenuated modified vaccinia virus Ankara (MVA) as an effective recombinant vector: a murine tumor model.

Carroll MW; Overwijk WW; Chamberlain RS; Rosenberg SA; Moss B; Restifo NP

Laboratory of Viral Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD 20892, USA.

Vaccine (ENGLAND) Mar 1997, 15 (4) p387-94, ISSN 0264-410X
Journal Code: X6O

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Modified vaccinia virus Ankara (MVA), a highly attenuated strain of vaccinia virus (VV) that is unable to replicate in most mammalian cells, was evaluated as an expression vector for a model tumor associated antigen (TAA) and as a potential anti-cancer vaccine. We employed an experimental murine model in which an adenocarcinoma tumor line, CT26.CL25, was stably transfected with a model TAA, beta-galactosidase (beta-gal). Mice injected intramuscularly with a recombinant MVA (rMVA) expressing beta-gal (MVA-LZ), were protected from a lethal intravenous (i.v.) challenge with CT26.CL25. In addition, splenocytes from mice primed with MVA-LZ were therapeutically effective upon adoptive transfer to mice bearing pulmonary metastases of the CT26.CL25 tumor established 3 days earlier. Most importantly, i.v. inoculation with MVA-LZ resulted in significantly prolonged survival of mice bearing three day old pulmonary metastases. This prolonged survival compared favorably to mice treated with a replication competent recombinant VV expressing beta-gal. These findings indicate that rMVA is an efficacious alternative to the more commonly used replication competent VV for the development of new recombinant anti-cancer vaccines.

8/7/18 (Item 18 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08906218 96342131

Host range restricted, non-replicating vaccinia virus vectors as vaccine candidates.

Moss B; Carroll MW; Wyatt LS; Bennink JR; Hirsch VM; Goldstein S; Elkins WR; Fuerst TR; Lifson JD; Piatak M; Restifo NP; Overwijk W; Chamberlain R; Rosenberg SA; Sutter G

Laboratory of Viral Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland 20892, USA.

Adv Exp Med Biol (UNITED STATES) 1996, 397 p7-13, ISSN 0065-2598
Journal Code: 2LU

Languages: ENGLISH

Document type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL

Three model systems were used to demonstrate the immunogenicity of highly attenuated and replication-defective recombinant MVA. (1) Intramuscular inoculation of MVA-IN-Fha/np induced humoral and cell-mediated immune responses in mice and protectively immunized them against a lethal respiratory challenge with influenza virus. Intranasal vaccination was also protective, although higher doses were needed. (2) In rhesus macaques, an

immunization scheme involving intramuscular injections of MVA-SIVenv/gag/pol greatly reduced the severity of disease caused by an SIV challenge. (3) In a murine cancer model, immunization with MVA-beta gal prevented the establishment of tumor metastases and even prolonged life in animals with established tumors. These results, together with previous data on the safety of MVA in humans, suggest the potential usefulness of recombinant MVA for prophylactic vaccination and therapeutic treatment of infectious diseases and cancer. (35 Refs.)

8/7/20 (Item 20 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1999 Dialog Corporation. All rts. reserv.
08697506 96215649
Evaluation of the thymidine kinase (tk) locus as an insertion site in the highly attenuated vaccinia MVA strain.
Scheiflinger F; Falkner FG; Dorner F
Biomedical Research Center, Immuno AG, Orth/Donau, Austria.
Arch Virol (AUSTRIA) 1996, 141 (3-4) p663-9, ISSN 0304-8608
Journal Code: 8L7
Languages: ENGLISH
Document type: JOURNAL ARTICLE
The highly attenuated 'modified vaccinia Ankara' (MVA) strain is a potential live vaccine vector. Insertional inactivation of the tk-gene resulted in viruses difficult to purify. Co-integration of a functional fowlpox virus tk-gene allowed easy generation of recombinants, indicating that the genetically stable tk-gene region is a suitable insertion site, if tk-gene activity is substituted.

8/7/21 (Item 21 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1999 Dialog Corporation. All rts. reserv.
08621790 95394156
Non-replicating vaccinia vector efficiently expresses bacteriophage T7 RNA polymerase.
Sutter G; Ohlmann M; Erfle V
Institut fur Molekulare Virologie, GSF-Forschungszentrum fur Unwelt und Gesundheit GmbH, Oberschleissheim, FRG.
FEBS Lett (NETHERLANDS) Aug 28 1995, 371 (1) p9-12, ISSN 0014-5793
Journal Code: EUH
Languages: ENGLISH
Document type: JOURNAL ARTICLE
Modified vaccinia virus Ankara (MVA), a host range restricted and highly attenuated vaccinia virus strain, is unable to multiply in human and most other mammalian cell lines. Since viral gene expression is unimpaired in non-permissive cells recombinant MVA viruses are efficient as well as exceptionally safe expression vectors. We constructed a recombinant MVA that expresses the bacteriophage T7 RNA polymerase and tested its usefulness for transient expression of recombinant genes under the control of a T7 promoter. Using the chloramphenicol acetyltransferase (CAT) gene as a reporter gene, infection with MVA-T7pol allowed efficient synthesis of recombinant enzyme in mammalian cells. Despite the severe host restriction of MVA, enzyme activities induced by infection with MVA-T7pol were similar to those determined after infection with a replication-competent vaccinia-T7pol recombinant virus. Thus, MVA-T7pol may be used as a novel vaccinia vector to achieve T7 RNA polymerase-specific recombinant gene expression in the absence of productive vaccinia virus replication.

8/7/22 (Item 22 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1999 Dialog Corporation. All rts. reserv.
08615925 95313355
Replication-deficient vaccinia virus encoding bacteriophage T7 RNA polymerase for transient gene expression in mammalian cells.
Wyatt LS; Moss B; Rozenblatt S
Laboratory of Viral Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland 20892-0455, USA.
Virology (UNITED STATES) Jun 20 1995, 210 (1) p202-5, ISSN 0042-6822
Journal Code: XEA
Languages: ENGLISH
Document type: JOURNAL ARTICLE
The vaccinia virus/bacteriophage T7 hybrid transient expression system employs a recombinant vaccinia virus that encodes the T7 RNA polymerase gene, a plasmid vector with a gene of interest regulated by a T7 promoter, and any cell line suitable for infection and transfection. Although high expression in a majority of cells is achieved, the severe cytopathic effects of vaccinia virus and the safety precautions required for use of infectious agents are undesirable features of the system. Here, we report the construction of a highly attenuated and avian host-restricted vaccinia virus recombinant that encodes the T7 RNA polymerase gene (MVA/T7 pol) and demonstrate the use of the virus for transient expression in mammalian cells. MVA/T7 pol has reduced cytopathic effects compared to the previously used replication-competent vaccinia virus, while providing a high level of gene expression in multiple mammalian cell lines.

8/7/24 (Item 24 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1999 Dialog Corporation. All rts. reserv.
08349418 95317472
Novel vaccinia vector derived from the host range restricted and highly attenuated MVA strain of vaccinia virus.
Sutter G; Moss B
Institute of Molecular Virology, GSF-Centre for Environmental and Health Research, Oberschleissheim, Germany.

Dev Biol Stand (SWITZERLAND) 1995, 84 p195-200, ISSN 0301-5149
Journal Code: E7V
Languages: ENGLISH
Document type: JOURNAL ARTICLE

8/7/25 (Item 25 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08194706 95066322

A recombinant vector derived from the host range-restricted and highly attenuated MVA strain of vaccinia virus stimulates protective immunity in mice to influenza virus.

Sutter G; Wyatt LS; Foley PL; Bennink JR; Moss B
Laboratory of Viral Disease, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD 20892.

Vaccine (ENGLAND) Aug 1994, 12 (11) p1032-40, ISSN 0264-410X
Journal Code: X6O
Languages: ENGLISH
Document type: JOURNAL ARTICLE

The immunogenicity of a recombinant virus derived from modified vaccinia virus Ankara (MVA), a host range-restricted, highly attenuated and safety-tested strain, was investigated. Plasmid transfer vectors that provide strong synthetic early/late promoters for the simultaneous expression of two genes as well as a transient or stable selectable marker and flanking sequences for homologous recombination with the MVA genome were constructed. A recombinant MVA containing influenza virus haemagglutinin and nucleoprotein genes was isolated in avian cells and shown to express both proteins efficiently upon infection of human or mouse cells in which abortive replication occurs. Mice, inoculated by various routes with recombinant MVA, produced antibody and cytotoxic T-lymphocyte responses to influenza virus proteins and were protected against a lethal influenza virus challenge as effectively as mice immunized with a recombinant derived from the replication-competent WR strain of vaccinia virus.

8/7/29 (Item 29 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07200489 93066340

Nonreplicating vaccinia vector efficiently expresses recombinant genes.

Sutter G; Moss B
Laboratory of Viral Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD 20892.

Proc Natl Acad Sci U S A (UNITED STATES) Nov 15 1992, 89 (22) p10847-51, ISSN 0027-8424 Journal Code: PV3
Languages: ENGLISH
Document type: JOURNAL ARTICLE

Modified vaccinia Ankara (MVA), a highly attenuated vaccinia virus strain that has been safety tested in humans, was evaluated for use as an expression vector. MVA has multiple genomic deletions and is severely host cell restricted: it grows well in avian cells but is unable to multiply in human and most other mammalian cells tested. Nevertheless, we found that replication of viral DNA appeared normal and that both early and late viral proteins were synthesized in human cells. Proteolytic processing of viral structural proteins was inhibited, however, and only immature virus particles were detected by electron microscopy. We constructed an insertion plasmid with the Escherichia coli lacZ gene under the control of the vaccinia virus late promoter P11, flanked by sequences of MVA DNA, to allow homologous recombination at the site of a naturally occurring 3500-base-pair deletion within the MVA genome. MVA recombinants were isolated and propagated in permissive avian cells and shown to express the enzyme beta-galactosidase upon infection of nonpermissive human cells. The amount of enzyme made was similar to that produced by a recombinant of vaccinia virus strain Western Reserve, which also had the lacZ gene under control of the P11 promoter, but multiplied to high titers. Since recombinant gene expression is unimpaired in nonpermissive human cells, MVA may serve as a highly efficient and exceptionally safe vector.

8/7/30 (Item 30 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06711702 91237336

Mapping of deletions in the genome of the highly attenuated vaccinia virus MVA and their influence on virulence.

Meyer H; Sutter G; Mayr A
Institute of Medical Microbiology, Infectious and Epidemic Diseases, Veterinary Faculty, Ludwig-Maximilians Universitat, Munchen, Germany.

J Gen Virol (ENGLAND) May 1991, 72 (Pt 5) p1031-8, ISSN 0022-1317
Journal Code: I9B
Languages: ENGLISH
Document type: JOURNAL ARTICLE

Different passages of the vaccinia virus strain Ankara (CVA wild-type) during attenuation to MVA (modified vaccinia virus Ankara) have been analysed to detect alterations in the genome. Physical maps for the restriction enzymes HindIII and XhoI have been established. Six major deletions relative to the wild-type strain CVA could be localized. They reduce the size of the entire genome from 208 kb (CVA wild-type) to 177 kb for the MVA strain. Four deletions occurred during the first 382 passages and the resulting variant (CVA 382) displays an attenuated phenotype similar to that of the MVA strain. The deletions are located in both terminal fragments, affect two-thirds of the host range gene K1L and eliminate 3.5 kb of a highly conserved region in the HindIII A fragment. During the next 190 passages leading to MVA two additional deletions appeared. Again, one is located in the left terminal fragment, and the

other includes the A-type inclusion body gene. Neither of the deletions appear to participate in further attenuation of the virus. Rescue of the partially deleted host range region with the corresponding wild-type DNA restored the ability of the attenuated strains MVA and CVA 382 to grow in some non-permissive tissue cultures. Nevertheless, the complete host range of the wild-type strain was not recovered. Also, plaque-forming behaviour and reduced virulence were not influenced. From the data presented it may be concluded that the partially deleted host range gene is not solely responsible for attenuation.

8/7/47 (Item 1 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs

0236644 DBA Accession No.: 99-06745
Protection against lethal Japanese-encephalitis virus infection of mice by immunization with the highly attenuated MVA strain of vaccinia virus expressing JEV prM and E genes - vaccinia virus recombinant vaccine
AUTHOR: Nam J H; Wyatt L S; Chae S L; Cho H W; Park Y K; +Moss B
CORPORATE AFFILIATE: Univ.Korea Nat.Inst.Health-Bethesda
CORPORATE SOURCE: 4 Center Drive, MSC 0445, Bethesda, MD 20892-0445, USA. email:bmoss@nih.gov
JOURNAL: Vaccine (17, 3, 261-68) 1999
ISSN: 0264-410X CODEN: VACCDE
LANGUAGE: English
ABSTRACT: A recombinant vaccinia virus expressing the prM (glycosylated precursor of the membrane protein) and E (glycosylated precursor of the envelope protein) proteins of Japanese-encephalitis virus (JEV) was developed and its immunogenicity was compared to the currently used inactivated JEV vaccine in a mouse model. The genes were obtained from the recent Korean JEV strain K94P05. The highly attenuated modified vaccinia virus Ankara (MVA) was used as the vector. MVA recombinants containing the JEV genes, under strong synthetic or modified H5 vaccinia virus promoters were isolated. Synthesis of JEV prM and E proteins was detected by immunofluorescence microscopy, flow cytometry and polyacrylamide gel electrophoresis. Mice immunized with 2 x 10(6) infectious units of MVA/JEV recombinants by i.m. or i.p. routes were completely protected against a 10(5) LD50 JEV challenge at 9 wk of age. (30 ref)
? t s11/7

11/7/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09775092 99043881
Molecular and functional characterization of Salmonella enterica serovar typhimurium poxA gene: effect on attenuation of virulence and protection.
Kaniga K; Compton MS; Curtiss R 3rd; Sundaram P
Megan Health, Inc., St. Louis, Missouri 63110, USA. kkaniga@meganhealth.com
Infect Immun (UNITED STATES) Dec 1998, 66 (12) p5599-606, ISSN 0019-9567 Journal Code: GO7
Languages: ENGLISH
Document type: JOURNAL ARTICLE
Salmonella enterica poxA mutants exhibit a pleiotropic phenotype, including reduced pyruvate oxidase activity; reduced growth rate; and hypersensitivity to the herbicide sulfometuron methyl, alpha-ketobutyrate, and amino acid analogs. These mutants also failed to grow in the presence of the host antimicrobial peptide, protamine. In this study, PoxA- mutants of S. enterica serovar Typhimurium (S. typhimurium) were found to be 10,000-fold attenuated in orally inoculated BALB/c mice and 1,000-fold attenuated in intraperitoneally inoculated BALB/c mice, compared to wild-type S. typhimurium UK-1. In addition, poxA mutants were found to be capable of colonizing the spleen, mesenteric lymph nodes, and Peyer's patches; to induce strong humoral immune responses; and to protect mice against a lethal wild-type Salmonella challenge. A 2-kb DNA fragment was isolated from wild-type S. typhimurium UK-1 based on its ability to complement an isogenic poxA mutant. The nucleotide sequence of this DNA fragment revealed an open reading frame of 325 amino acids capable of encoding a polypeptide of 36.8 kDa that was confirmed in the bacteriophage T7 expression system. Comparison of the translated sequence to the available databases indicated high homology to a family of lysyl-tRNA synthetases. Our results indicate that a mutation of poxA has an attenuating effect on Salmonella virulence. Further, poxA mutants are immunogenic and could be useful in designing live vaccines with a variety of bacterial species. To our knowledge, this is the first report on the effect of poxA mutation on bacterial virulence.
? t s11/kwic

11/KWIC/1 (Item 1 from file: 155)
DIALOG(R)File 155:(c) format only 1999 Dialog Corporation. All rts. reserv.
... capable of encoding a polypeptide of 36.8 kDa that was confirmed in the bacteriophage T7 expression system. Comparison of the translated sequence to the available databases indicated high homology to...
...; Enzymology--EN; Salmonella typhimurium--Immunology--IM; Salmonella Infections, Animal--Prevention and Control--PC; Sequence Analysis, DNA ; Vaccines , Attenuated
Enzyme No.: EC 2.7.7.- (bacteriophage T7 induced RNA polymerase); EC 2.7.7.6 (DNA-Directed RNA Polymerase); EC 6.1...
Chemical Name: bacteriophage T7 induced RNA polymerase; (DNA-Directed RNA Polymerase; (Lysine-tRNA Ligase; (Antibodies, Bacterial; (Bacterial Vaccines; (Recombinant...
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$31.59 Estimated cost this search
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